

elf atochem

Contains No CBI

ELF ATOCHEM NORTH AMERICA, INC.

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King of Prussia, PA 19406-0018

Tel: 215-337-6500

92 OCT -3 AM 7:59

(A)

September 8, 1992

BEHQ-92-12676
INIT
889200 10855

CERTIFIED MAIL

RETURN RECEIPT REQUESTED

Document Processing Center (TS-790)
Office of Toxic Substances
U.S. Environmental Protection Agency
401 M St., S.W.
Washington, D.C. 20460

Attn: Section 8(e) Coordinator (CAP Agreement)

RE: Report Submitted Pursuant to the TSCA Section 8(e)
Compliance Audit Program

CAP Identification Number: 8ECAP-0026

Dear Sir/Madam:

Pursuant to the Toxic Substances Control Act (TSCA) Section 8(e) Compliance Audit Program and the Agreement for TSCA Section 8(e) Compliance Audit Program (CAP Agreement) executed by Elf Atochem North America Inc. (Atochem) and Environmental Protection Agency (EPA), Atochem is submitting the enclosed acute oral toxicity study in rats to the EPA. This study does not involve effects in humans.

Nothing in this letter or the enclosed study report is considered confidential business information of Atochem.

The enclosed study report provides information on the chemical 3-hydroxy propyl mercaptan. Its exact chemical name is 3-mercapto-1-propanol and its CAS number is 19721-22-3.

The title of the enclosed study report is 3-Hydroxy Propyl Mercaptan #434 Toxicology Report. This report consists of four studies. The following is a summary of the adverse effects observed in the acute oral toxicity study.

Administration of 3-hydroxy propyl mercaptan by gavage to groups of male rats at dosages ranging from 100 to 283 mg/kg resulted in sudden violent running and leaping seizures without loss of consciousness or of the righting reflex. These seizures persisted for less than 30

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2/13/95

TSCA CAP
3-Hydroxy Propyl Mercaptan
September 8, 1992
Page Two

seconds and were followed by severe exhaustion until death or recovery. The oral LD₅₀ value was determined to be 134 mg/kg in this study.

Atochem previously submitted a TSCA Section 8(e) notice on 3-hydroxy propyl mercaptan. The submission was made August 21, 1992; we have not been notified by EPA of the EPA Document Control Number for this submission.

Further questions regarding this submission may be directed to me at 215 337-6892.

Sincerely,



C.H. Farr, PhD, DABT
Manager, Product Safety
and Toxicology

Enclosures

Filed: MN 5215-85

TR 81-135

A. R. LATVEN
Director

in Microfilm

BOX 70, 21 MAIN STREET
DARBY, PA. 19023
(215) 586-0707

**PHARMACOLOGY RESEARCH,
INC.**

25 AUGUST 1981

DR. JEFFREY D. MIANO
PENNWALT CORPORATION
3 PARKWAY
PHILADELPHIA, PA. 19102

DEAR DR. MIANO:

ENCLOSED IS A REPORT OF OUR FINDINGS WITH 3-OH PROPYL
MERCAPTAN #434.

THE ACUTE ORAL LD₅₀ IN RATS WAS FOUND TO BE 134 MG/KG
WITH ASTINISHINGLY VIOLENT EFFECTS IN THE TREATED ANIMALS (SEE
THE APPENDED DESCRIPTION). THE PRINCIPLE HAZARD IN THIS REGARD
IS THE RAPIDITY WITH WHICH TOXIC EFFECTS ARE INDUCED AND DEATH
OCCURS. IT SHOULD BE OBVIOUS THAT ANTIDOTAL TREATMENT MUST BE
IMMEDIATE.

APPLIED DERMALLY ON RABBITS, THE LIQUID WAS TOXIC AT
2000 MG/KG BUT NONTOXIC AT 200 MG/KG. HERE DECONTAMINATION
BY WASHING WITH PLAIN WATER SHOULD BE ADEQUATE.

ALTHOUGH THE PRODUCT WAS NOT IRRITATING TO THE SKIN
OF RABBITS BY THE 4-HOUR DOT TEST, EYE INSTILLATIONS CAUSED
CONJUNCTIVAL INFLAMMATION, IRITIS, AND GRADUAL OPACIFICATION
OF THE CORNEA. SINCE THE LATTER SHOWED NO SIGNS OF REMISSION
AFTER 14 DAYS, THE LIQUID IS CLASSIFIED AS "CORROSIVE" ACCORDING
TO THE I.R.L.G. GUIDELINES OF AUGUST 1979.

IN SUMMARY, THIS PRODUCT SHOULD BE HANDLED WITH APPROPRIATE
CAUTION BECAUSE OF ITS TOXICITY.

SINCERELY YOURS,
A.R. Latven
A.R. LATVEN
PHARMACOLOGY RESEARCH

ENC: REPORT, 3 COPIES
STATEMENT + 3 CC

LETTER + REPORT + COPY TO J. A. SECKAR, KING OF PRUSSIA, PA.

PENNWALT CORPORATION
OCCUPATIONAL HEALTH & SAFETY

REC'D AUG 27 1981

READ BY _____ DATE _____
APIS BY _____ DATE _____

CAS 19721-22-3


APPENDED TO LETTER OF 8/25/81 TO DR. J. D. MIANO, PENNWALT CORPORATION.
RE: EFFECTS OF 3-OH PROPYL MERCAPTAN IN RATS TREATED ORALLY.

AS A MATTER OF RECORD, HERE ARE MY SYMPTOMATOLOGY NOTES; THESE ARE MUCH MORE REALISTIC THAN THE REPORTED OBJECTIVE ITEMIZATION:

SPONTANEOUS MOTOR ACTIVITY CEASES WITHIN MINUTES AS SIGNS OF INCREASING APPREHENSION AND GROWING PANIC BECOME EVIDENT. THEN WITH UNEXPECTED SUDDENNESS A VIOLENT, RUNNING, LEAPING "CONVULSIVE" SEIZURE IS PRECIPITATED IN WHICH THE RAT LITERALLY BOUNCES FROM WALL TO WALL* LIKE A PING-PONG BALL AND IN A STATE OF UNCONTROLLABLE FRENZY; DURING THE EPISODE THE ANIMAL SCREAMS CONTINUOUSLY AND IS QUITE VICIOUS. (THE SEIZURE DIFFERS FROM A TRUE CLONIC CONVULSION IN THAT CONSCIOUSNESS AND THE RIGHTING REFLEX ARE RETAINED THROUGHOUT.) SUCH SEIZURES APPEAR 9 ± 5 MINUTES AFTER TREATMENT, DO NOT LAST MORE THAN 30 SECONDS, AND OCCUR SINGLY OR MULTIPLY IN RAPID SUCCESSION. THEREAFTER THE RAT IS IN A STATE OF INTENSE PHYSICAL EXHAUSTION WHICH USUALLY TERMINATES IN DEATH LESS THAN 30 MINUTES POST-DOSAGE.

REMARKABLY, EACH OF THREE EPISODIC SURVIVORS GAINED BODY WEIGHT OVERNIGHT AS DID ALL OF THE OTHER SURVIVORS.

*THE ACRYLIC OBSERVATION CAGES MEASURE 45 x 45 x 23 CM.


PHARMACOLOGY RESEARCH, INC.

TOXICOLOGY REPORT
FOR PENNWALT CORPORATION

RE: 3-HYDROXY PROPYL MERCAPTAN #434.

A CLEAR, COLORLESS LIQUID; AMBIENT D = 1.056 g/ML.

SUMMARY. (1) ACUTE ORAL TOXICITY IN RATS: LD₅₀ = 134 MG/KG (2σ = 115-154).

(2) ACUTE DERMAL TOXICITY IN RABBITS: TOXIC AT 2000 MG/KG,
NONTOXIC AT 200 MG/KG.

(3) EYE IRRITANCY IN RABBITS: CORROSIVE.

(4) DOT SKIN CORROSIVITY IN RABBITS: NONCORROSIVE, NONIRRITATING.

(1) ACUTE ORAL TOXICITY IN RATS.

METHOD. THE UNDILUTED SAMPLE WAS ADMINISTERED BY STOMACH TUBE TO ♂ WBS/W RATS, 175± g BW. THE ANIMALS WERE HOUSED INDIVIDUALLY FOR TWO HOURS AFTER DOSAGE AND SURVIVORS WERE OBSERVED FOR SEVEN DAYS.

RESULTS.

ORAL DOSE MG/KG	NO. RATS DEAD/TOTAL	MORTALITY	TIME FOR DEATH MINUTES
100	0 / 6	0 %	- - - - -
141	4 / 6	67 %	- - 22, 29, <50, <50
200	6 / 6	100 %	18, 21, 23, 24, 24, <30
283	3 / 3	100 %	12, 22, 26

LD₅₀ = 134 MG/KG (115-154 = 95% CONFIDENCE LIMITS).

SYMPTOMATOLOGY: SUDDEN VIOLENT RUNNING AND LEAPING SEIZURES WITHOUT LOSS OF CONSCIOUSNESS OR OF THE RIGHTING REFLEX, PERSISTED FOR LESS THAN 30 SECONDS, AND WERE FOLLOWED BY SEVERE EXHAUSTION UNTIL DEATH OR RECOVERY.

(2) ACUTE DERMAL TOXICITY IN RABBITS.

METHOD. THREE RABBITS (WBS/NZW) WERE TREATED WITH 2000 MG/KG (UNDILUTED SAMPLE) AND THREE RABBITS WERE TREATED WITH 200 MG/KG (AS A 10% AQUEOUS DILUTION). INDIVIDUAL DOSES WERE APPLIED TO THE FUR-CLIPPED SKIN OF THE TRUNK UNDER A PRE-FITTED OCCLUDING SLEEVE ON EACH ANIMAL. THE SLEEVES WERE REMOVED FROM SURVIVORS 24 HOURS LATER AND THE TREATED SITES WASHED WITH WARM WATER. THEY WERE THEN OBSERVED FOR SEVEN DAYS.

RESULTS. 2000 MG/KG (UNDILUTED SAMPLE): EACH OF THE THREE RABBITS DIED OVERNIGHT DURING THE PERIOD OF EXPOSURE.

200 MG/KG (10% AQUEOUS DILUTION): NONE OF THESE RABBITS SHOWED ANY ADVERSE EFFECTS AND ALL GAINED BODY WEIGHT DURING THE SUBSEQUENT PERIOD OF OBSERVATION.

(CONTINUED)

(3) EYE IRRITANCY IN RABBITS.

METHOD. ONE-TENTH ML OF THE SAMPLE WAS PLACED IN THE CONJUNCTIVAL SAC OF ONE EYE OF EACH OF SIX ALBINO RABBITS (WBS/NZW). THE RESULTING REACTIONS WERE SCORED PERIODICALLY FOR FOURTEEN DAYS.

RESULTS. CORNEA. EPITHELIAL PEELING BECAME OBVIOUS WITHIN TWO HOURS AND DISCTICT CLOUDING BECAME MANIFEST ON THE THIRD DAY; THE LATTER INTENSIFIED TO AREAS OF OPAQUE OPACIFICATION WITHIN SIX DAYS AND, TOGETHER WITH CIRCUMCORNEAL INJECTION, SHOWED NO SIGNS OF REMISSION THROUGH THE 14TH DAY. NOTE: CURIOUSLY, ONE RABBIT DEVELOPED A CONICAL CORNEA (KERATOCORNEA) BY THE 14TH DAY; ITS SIGNIFICANCE IS NOT KNOWN.

IRIS. MILD CONGESTION APPEARED PROMPTLY, BECAME SEVERE AT 24, 48 AND 72 HOURS, AND THEN SUBSIDED TO NORMALCY. THE LIGHT REFLEX REMAINED NORMAL THROUGHOUT.

CONJUNCTIVAE. MARKED INFLAMMATION DEVELOPED WITHIN ONE HOUR AND RESIDUAL EFFECTS WERE STILL PRESENT ON THE 14TH DAY.

AVERAGE SCORES WERE AS FOLLOWS:

TIME	CORNEA	IRIS	CONJUNCTIVAE		OTHER
			REDNESS	CHEMOSIS	
10 MIN	>0	>0	>1	>0	ML, SM
1 HR	>0	>0	<2	<2	ML
2 HRS	>0 ^{EP}	>0	<2	<2	ML
4 HRS	>0 ^{EP}	<1	<2	<2	ML
24 HRS	>0	1	2	2	
48 HRS	>0	1	2	<2	D
72 HRS	1	1	2	>1	
4 DA	1	<1	2	1	
5 DA	2	<1	>1	0	
6 DA	4*	0	>1	0	CI
7 DA	4*	0	1	0	CI
11 DA	4*	0	1	0	CI
14 DA	4*	0	1	0	CI

*NONUNIFORM.

ML, MILD LACRIMATION.

SM, SLIGHT MIOSIS.

EP, EPITHELIAL PEELING.

D, DISCHARGE.

CI, CIRCUMCORNEAL INJECTION.

(CONTINUED)

(3-HYDROXY PROPYL MERCAPTAN #434 CONCLUDED)

-3-

(4) DOT SKIN CORROSIVITY IN RABBITS.

METHOD. AS PRESCRIBED IN 49 CFR 173.240 (SIX ALBINO RABBITS, FOUR HOURS SKIN CONTACT, 48 HOURS OBSERVATION).

RESULTS. NO EFFECTS OF ANY KIND WERE DISCERNIBLE AT ANY OF THE TREATED SKIN SITES AT ANY TIME.

PHARMACOLOGY RESEARCH, INC.

BY

A. R. Latven
A. R. LATVEN 8/25/81

PROTOCOL REFS: PR#81.5636; ARL 39: (1) 11, (2) 19, (3) 17, (4) 15.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

C. H. Farr, PhD, DABT
Manager, Product Safety and Toxicology
Atochem North America, Inc.
900 First Avenue
P.O. Box 1536
King of Prussia, Pennsylvania 19406-0018

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

APR 18 1995

EPA acknowledges the receipt of information submitted by your organization under Section 8(e) of the Toxic Substances Control Act (TSCA). For your reference, copies of the first page(s) of your submission(s) are enclosed and display the TSCA §8(e) Document Control Number (e.g., 8EHQ-00-0000) assigned by EPA to your submission(s). Please cite the assigned 8(e) number when submitting follow-up or supplemental information and refer to the reverse side of this page for "EPA Information Requests".

All TSCA 8(e) submissions are placed in the public files unless confidentiality is claimed according to the procedures outlined in Part X of EPA's TSCA §8(e) policy statement (43 FR 11110, March 16, 1978). Confidential submissions received pursuant to the TSCA §8(e) Compliance Audit Program (CAP) should already contain information supporting confidentiality claims. This information is required and should be submitted if not done so previously. To substantiate claims, submit responses to the questions in the enclosure "Support Information for Confidentiality Claims". This same enclosure is used to support confidentiality claims for non-CAP submissions.

Please address any further correspondence with the Agency related to this TSCA 8(e) submission to:

Document Processing Center (7407)
Attn: TSCA Section 8(e) Coordinator
Office of Pollution Prevention and Toxics
U.S. Environmental Protection Agency
Washington, D.C. 20460-0001

EPA looks forward to continued cooperation with your organization in its ongoing efforts to evaluate and manage potential risks posed by chemicals to health and the environment.

Sincerely,

Terry R. O'Bryan
Terry R. O'Bryan
Risk Analysis Branch

Enclosure

12676A



Recycled/Recyclable
Printed with Soy/Canola Ink on paper that
contains at least 50% recycled fiber

Triage of 8(e) Submissions

Date sent to triage: APR 20 1995

NON-CAP

CAP

Submission number: 12676A

TSCA Inventory:

Y

N

D

Study type (circle appropriate):

Group 1 - Dick Clements (1 copy total)

ECO

AQUATO

Group 2 - Ernie Falke (1 copy total)

ATOX

SBTOX

SEN

W/NEUR

Group 3 - Elizabeth Margosches (1 copy each)

STOX

CTOX

EPI

RTOX

GTOX

STOX/ONCO

CTOX/ONCO

IMMUNO

CYTO

NEUR

Other (FATE, EXPO, MET, etc.):

Notes:

THIS IS THE ORIGINAL 8(e) SUBMISSION; PLEASE REFILE AFTER TRIAGE DATABASE ENTRY

For Contractor Use Only				
entire document:	<u>0</u>	<u>1</u>	<u>2</u> pages <u>42</u>	pages <u>42</u>
Notes:				
Contractor reviewer:	<u>FDR</u>		Date:	<u>3/29/95</u>

CECATS TRIAGE TRACKING DBASE ENTRY FORM

CECATS DATA:
Submission # 8EHQ-1092-12676 SEQ. A

TYPE: INT. SUPP FLWP

SUBMITTER NAME: Elf Atochem North America, Inc.

INFORMATION REQUESTED: FLWP DATE: 02/13/95
0501 NO INFO REQUESTED
0502 INFO REQUESTED (TECH)
0503 INFO REQUESTED (VOL ACTIONS)
0504 INFO REQUESTED (REPORTING RATIONALE)

DISPOSITION:

0630 REFER TO CHEMICAL SCREENING
0670 CAP NOTICE

SUB. DATE: 09/08/92 OTS DATE: 10/08/92 CSRAD DATE: 02/13/95

CHEMICAL NAME:

CAS#

19721-22-3

VOLUNTARY ACTIONS:

- 0401 NO ACTION REPORTED
- 0402 STUDIES PLANNED/IN PROGRESS
- 0403 NOTIFICATION OF WORKING CONDITIONS
- 0404 LABEL/MSDS CHANGES
- 0405 PROCESS/HAZARDING CHANGES
- 0406 APP/USE DISCONTINUED
- 0407 PRODUCTION DISCONTINUED
- 0408 CONFIDENTIAL

INFORMATION TYPE:	P F C	INFORMATION TYPE:	P F C	INFORMATION TYPE:	P F C
0201 ONCO (HUMAN)	01 02 04	0216 EPI/CIN	01 02 04	0241 IMMUNO (ANIMAL)	01 02 04
0202 ONCO (ANIMAL)	01 02 04	0217 HUMAN EXPOS (PROD CONTAM)	01 02 04	0242 IMMUNO (HUMAN)	01 02 04
0203 CELL TRANS (IN VITRO)	01 02 04	0218 HUMAN EXPOS (ACCIDENTAL)	01 02 04	0243 CHEM/PHYS PROP	01 02 04
0204 MUTA (IN VITRO)	01 02 04	0219 HUMAN EXPOS (MONITORING)	01 02 04	0244 CLASTO (IN VITRO)	01 02 04
0205 MUTA (IN VIVO)	01 02 04	0220 ECO/AQUA TOX	01 02 04	0245 CLASTO (ANIMAL)	01 02 04
0206 REPRO/TERATO (HUMAN)	01 02 04	0221 ENV. OCCURRENCE/FATE	01 02 04	0246 CLASTO (HUMAN)	01 02 04
0207 REPRO/TERATO (ANIMAL)	01 02 04	0222 EMER. INCI OF ENV CONTAM	01 02 04	0247 DNA DAM/REPAIR	01 02 04
0208 NFURO (HUMAN)	01 02 04	0223 RESPONSE REQUEST DELAY	01 02 04	0248 PRODAUSE/PROC	01 02 04
0209 NEURO (ANIMAL)	01 02 04	0224 PROD/COMP/CHEM ID	01 02 04	0251 MSDS	01 02 04
0210 ACUTE TOX. (HUMAN)	01 02 04	0225 REPORTING RATIONALE	01 02 04	0299 OTHER	01 02 04
0211 CHR. TOX. (HUMAN)	01 02 04	0226 CONFIDENTIAL	01 02 04		
0212 ACUTE TOX. (ANIMAL)	01 02 04	0227 ALLERG (HUMAN)	01 02 04		
0213 SUB ACUTE TOX (ANIMAL)	01 02 04	0228 ALLERG (ANIMAL)	01 02 04		
0214 SUB CHRONIC TOX (ANIMAL)	01 02 04	0229 METAB/PHARMACO (ANIMAL)	01 02 04		
0215 CHRONIC TOX (ANIMAL)	01 02 04	0240 METAB/PHARMACO (HUMAN)	01 02 04		

TRIAGE DATA: NON-CBI INVENTORY: YES NO CAS SR IN HUMANI

ONGOING REVIEW: YES (DROP/REFER) NO (CONTINUE) REFTR

SPECIES: RAT RGT

TOXICOLOGICAL CONCERN: LOW MED HIGH

USE: PRODUCTION:

10/11/95

8 (E) -12676A

M/M/H/L

ACUTE ORAL TOXICITY IN WBS/W RATS IS OF MEDIUM CONCERN BASED ON AN LD50 OF 134 MG/KG. DOSAGES (GAVAGE) AND MORTALITY DATA ARE AS FOLLOWS: 100 MG/KG (0/6); 141 MG/KG (4/6), 200 MG/KG (6/6); AND 283 MG/KG (3/3). CLINICAL SIGNS WITHIN 4 TO 14 MINUTES AFTER TREATMENT INCLUDED SUDDEN VIOLENT RUNNING AND LEAPING SEIZURES AND WERE FOLLOWED BY SEVERE EXHAUSTION UNTIL DEATH OR RECOVERY.

ACUTE DERMAL TOXICITY IN WBS/NZW RABBITS IS OF MEDIUM CONCERN. DOSAGE AND MORTALITY DATA ARE AS FOLLOWS: 200 MG/KG (0/3); AND 2000 MG/KG (3/3). AT 200 MG/KG, THERE WERE NO ADVERSE EFFECTS.

ACUTE EYE IRRITATION IN RABBITS (6) IS OF HIGH CONCERN BASED ON EPITHELIAL PEELING AND CONJUNCTIVITIS (INCIDENCE NOT REPORTED) FROM EXPOSURE TO 0.1 ML OF TEST SUBSTANCE. GRADUAL OPACIFICATION OF THE CORNEA SHOWED NO SIGNS OF REMISSION BY TERMINATION AT DAY 14.

ACUTE DERMAL IRRITATION IN RABBITS IS OF LOW CONCERN BASED ON NO IRRITATION (6/6) AT 48 HOURS FROM A 4-HOUR EXPOSURE TO TEST SUBSTANCE (AMOUNT NOT REPORTED).